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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/745,157

12/20/2000

Jeffrey A. Korn

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07/14/2004

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EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2633

9

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,157

Applicant(s)

KORN ET AL.

Examiner

Hanh Phan

Art Unit

2633

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-16, 21-25, 27, 28 and 31 is/are rejected.
- 7) ☒ Claim(s) 8, 17-20, 26, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 04/22/2004.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 5, 9-12, 16-22 and 29-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,674,065 (Atia et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1, 5, 9-12, 16-22 and 29-31 of the instant application are encompassed by claims 1-11 of U.S. Patent No. 6,674,065 (Atia et al).

Regarding claims 1, 21, 22 and 31, Atia discloses a scanning optical monitoring system, comprising:

a tunable optical filter that scans a pass band across a signal band of a WDM signal to generate a filtered signal corresponding to a spectrum of the WDM signal;

a photo detector that generates an electrical signal in response to the filtered signal;

a decision circuit that compares the electrical signal to a threshold; and

a controller that is responsive to the decision circuit to inventory channels in the WDM signal by comparing a spectral position of an instantaneous pass band of the tunable filter to a response of the decision circuit to determine the channel inventory of the WDM signal (see claims 1-11 of Atia).

Regarding claim 5, Atia discloses the tunable optical filter is a Fabry-Perot filter (see claims 1-11 of Atia).

Regarding claim 9, Atia discloses the tunable filter comprises an electrostatic drive cavity in which an electrostatic field is generated to displace a flexible membrane of the tunable filter (see claims 1-11 of Atia).

Regarding claims 10-12, Atia discloses a free spectral range of the tunable filter is greater than a bandwidth of the signal band of the WDM signal (see claims 1-11 of Atia).

Regarding claim 16, Atia discloses a filter tuning voltage generator that generates a tuning voltage to the optical tunable filter (see claims 1-11 of Atia).

Regarding claims 17-20, 29 and 30, Atia discloses a filter tuning voltage generator that generates a tuning voltage to the optical tunable filter that improves a linearization of the tuning of the passband as a function of time over at least a portion of the scan of the signal band (see claims 1-11 of Atia).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the channel inventory" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 14-16, 21, 22, 27, 28 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Hall et al (US Patent No. 6,559,943).

Regarding claims 1, 21, 22 and 31, referring to Figures 1 and 4, Hall discloses a scanning optical monitoring system, comprising:

a tunable optical filter (i.e., fiber optic tunable filter 12, Fig. 1) that scans a pass band across a signal band of a WDM signal to generate a filtered signal corresponding to a spectrum of the WDM signal;

a photo detector (i.e., photodetector 18, Fig. 1) that generates an electrical signal in response to the filtered signal;

a decision circuit (i.e., sample comparison circuit 20, Fig. 1) that compares the electrical signal to a threshold; and

a controller (i.e., bus controller 26, Fig. 1) that is responsive to the decision circuit to inventory channels in the WDM signal by comparing a spectral position of an instantaneous pass band of the tunable filter to a response of the decision circuit to determine the channel inventory of the WDM signal (see col. 3, lines 46-67, col. 4, lines 1-67 and col. 5, lines 1-42).

Regarding claims 15, 27 and 28, Hall further teaches the controller generates a threshold set signal that specifies a level of the threshold applied by the decision circuit (Figs. 1 and 4).

Regarding claim 14, Hall further teaches a timing recovery circuit (i.e., timing and control circuit 22, Fig. 1) that controls sampling of the decision circuit by the controller.

Regarding claim 16, Hall further teaches a filter tuning voltage generator that generates a tuning voltage to the optical tunable filter (Fig. 1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-5, 9-12, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (US Patent No. 6,559,943) in view of Vanoli et al (US Patent No. 5,943,147 cited by applicant).

Regarding claims 2-4, 23 and 24, Hall teaches all the limitations of the claimed invention as set forth in the rejection to claims 1, 21 and 22 above except fails to teach the tunable optical filter tunes across the signal band in less than 1 millisecond. However, Vanoli teaches a tunable optical filter tunes across the signal band in less than 1 millisecond (Figs. 1, 3, 5 and 11, col. 11, lines 42-67 and col. 12, lines 1-37 and col. 13, lines 34-67). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the tunable optical filter tunes across the signal band in less than 1 millisecond as taught by Vanoli in the system of Hall. One of ordinary skill in the art would have been motivated to do this since Vanoli suggests in column 13, lines 34-67 that using such a tunable optical filter tunes across the signal band in less than 1 millisecond has advantage of allowing the filter will have no time to heat, hereby; its thermal instability will have no time to affect very much, so the filter's wavelength response will change hardly at all.

Regarding claim 5, Hall further teaches the tunable optical filter is a Fabry-Perot filter (col. 3 of Hall, lines 46-67).

Regarding claim 9, the combination of Hall and Vanoli teaches the tunable filter comprises an electrostatic drive cavity in which an electrostatic field is generated to displace a flexible membrane of the tunable filter (Fig. 1 of Hall and col. 11 of Vanoli, lines 42-67 and col. 12, lines 1-37).

Regarding claims 10-12, the combination of Hall and Vanoli teaches a free spectral range of the tunable filter is greater than a bandwidth of the signal band of the WDM signal (Fig. 1 of Hall and col. 11 of Vanoli, lines 42-67 and col. 12, lines 1-37 and col. 13, lines 34-67).

10. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (US Patent No. 6,559,943) in view of Bach et al (US Patent No. 6,606,354).

Regarding claims 6 and 25, Hall teaches all the limitations of the claimed invention as set forth in the rejection to claims 1 and 22 above except fails to teach an electronic filter that low pass filters the electronic signal from the photo detector. However, Bach teaches an electronic filter (i.e., low pass filter 3, Fig. 2) that low pass filters the electronic signal from the photo detector (col. 3, lines 27-61 and col. 4, lines 1-20). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the electronic filter that low pass filters the electronic signal from the photo detector as taught by Bach in the system of Hall. One of ordinary skill in the art would have been motivated to do this since Bach suggests in column 3,

lines 27-61 and col. 4, lines 1-20 that using such an electronic filter that low pass filters the electronic signal from the photo detector has advantage of allowing selecting the wanted signal and eliminating the unwanted signals and signal noise and increasing the signal to noise ratio.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (US Patent No. 6,559,943) in view of Vanoli et al (US Patent No. 5,943,147 cited by applicant) and further in view of Delavaux et al (US Patent No. 5,646,762).

Regarding claim 13, Hall as modified by Vanoli above teaches all the limitations of the claimed invention as set forth in the rejection to claim 12 above except fails to teach a WDM filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector. However, Delavaux teaches a WDM filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector (Fig. 1, col. 2, lines 37-67, col. 3, lines 1-67 and col. 4, lines 1-4). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the WDM filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and second sub-band detector as taught by Delavaux in the system of Hall modified by Vanoli. One of ordinary skill in the art would have been motivated to do this since Delavaux suggests in column 2, lines 37-67, col. 3, lines 1-67 and col. 4, lines 1-4 that using such a WDM filter for separating the filtered signal into a first sub-band and a second sub-band and a first sub-band detector and

second sub-band detector has advantage of allowing calibration can be performed simultaneously with monitoring. This can be used to accomplish faster and more accurate scanning.

Allowable Subject Matter

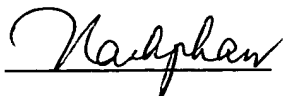
12. Claims 8, 17-20, 26, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



Hanh Phan

07/07/2004